

were rejected. In response thereto, claims 1, 2, and 4-9 have been amended herein, claim 3 has been cancelled, and new claims 10-13 have been added to more completely claim the invention. Support for new claims 10 and 12 can be found in the Specification on page 79, lines 4-10. Support for new claim 13 can be found in claim 1 as originally filed. Support for new claim 11 can be found in the Specification on page 78, line 15 through page 81, line 2 and in Figure 60. None of the amendments set forth herein constitute the addition of new matter. As a result of this Amendment, claims 1-2 and 4-13 remain pending for the Examiner's consideration. In addition, the Title of the Invention has been amended to reflect the claims of the invention as amended. Reexamination and reconsideration of the application, as amended, are requested.

A. Objection to Drawings addressed - *Withdrawn*

The drawings are objected to for not showing "a spring means" as recited in claims 1 and 3 as originally filed. Claim 1 has been amended herein to delete reference to "a spring means," and claim 3 has been cancelled herein, thereby obviating this objection.

B. Rejection under 35 U.S.C. § 112, second paragraph addressed - *Withdrawn*

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, for lacking antecedent basis the claim limitation "piston." The term "piston" has been deleted as a result of amendments made to claim 1, thereby obviating this rejection. Withdrawal of this rejection is respectfully requested.

C. Rejections under 35 U.S.C. § 103(a) addressed

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being anticipated by Antanavich et al. (U.S. Patent No. 5,788,662) and further in view of Fukunaga et al. (U.S. Patent No. 5,582,596). The Office Action states that Antanavich discloses a platelet gel delivery system having a dual chamber cartridge comprising a first and second elongated hollow body, but fails to teach a spring that is positioned to move the plunger means positioned within the first elongated hollow body. The Office Action then relies on Fukunaga to supply the teaching of a spring means, and concludes it would have been obvious to combine Antanavich with Fukunaga because Fukunaga disclose using a spring to urge the plunger towards the opening. This rejection is respectfully traversed.

Claim 1 has been amended herein to delete the phrase "a spring means urging one end

of said piston means toward said opening." Accordingly, the Office Action's reliance on Fukunaga is moot, and the rejection falls. Withdrawal of this Section 35 U.S.C. § 103(a) rejection of claims 1-9 over Antanavich et al. in view of Fukunaga et al. is respectfully requested.

It is further asserted that claims 1, 2 and 4-9 as amended herein, as well as new claims 10-13, contain several elements not taught or suggested by Antanavich alone, and therefore are novel and nonobvious over Antanavich as discussed below.

Independent claims 1 and 11 are directed towards a platelet gel delivery system. The systems of this invention is designed for preparing both components of the platelet gel (i.e., thrombin and an inactivated blood component) in separate collection chambers, and is further designed to allow mixing of these components as they are delivered from the system. More specifically, the system of claims 1 and 11 comprises a dispenser having at least a first and second chamber for receiving at least one inactive blood component. The first chamber receives and activates a first portion of a separated inactive blood component from a centrifuge and stores the resulting coagulated blood component comprising a clot and thrombin, and the second chamber receives and activates a second portion of the inactive blood component.

Intended use
In contrast, Antanavich does not disclose a platelet gel delivery system, but rather discloses a system for producing a platelet-rich plasma concentrate (column 12, lines 15-17).

The platelet rich plasma concentrate is prepared using an apparatus having a first chamber containing a first separator for separating plasma and platelets from whole blood, and a second chamber in fluid communication with the first chamber and containing a concentrator for concentrating the platelet rich plasma. The second chamber also contains a second separator (i.e., a filter) for separating the concentrated platelet rich plasma from the concentrator (column 15, lines 45-59). Thus, Antanavich does not teach or even suggest a system comprising a first chamber for receiving and producing the thrombin component of a platelet gel and a second chamber for receiving and storing the inactivated blood component of the platelet gel.

Further, Antanavich does not disclose an outlet lumen adapted for connection at one end to a centrifuge and at another site along its length to the first hollow tube or vessel through a first valve as recited in claim 11. Antanavich also does not disclose a tube connected to the second vessel and to the outlet tube for combining the thrombin component and the inactive blood component in order to product the platelet gel as recited in claim 11.

Rather, the platelet rich plasma concentrate prepared by the Antanavich system is removed from the system and used as the source of fibrinogen for preparing a fibrin glue.

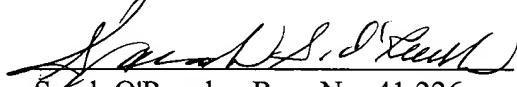
Accordingly, Antanavich does not teach or even suggest every element of claims 1, 2 and 4-13, and therefore all pending claims are novel and nonobvious over the cited art.

CONCLUSIONS

It is believed that all the claims now pending in this patent application, as amended and described above, are now allowable. Therefore, it is respectfully requested that the Examiner reconsider his rejections and to grant an early allowance. If any questions or issues remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number listed below. The fee required for filing a Petition for a Three Month Extension of Time accompanies this Amendment and Remarks. Should any additional fees be required, the Examiner is authorized to charge Deposit Account No. 50-1123.

Respectfully submitted,

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Dated


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MARKED UP VERSION SHOWING AMENDMENT TO TITLE

Please amend the title of the invention as follows:

AUTOLOGOUS PLATELET GEL [SPRAY] DELIVERY SYSTEM

CLEAN VERSION OF AMENDED TITLE

Please replace the title of the invention with the following:

AUTOLOGOUS PLATELET GEL DELIVERY SYSTEM